

A zoom feature for any or all of the process levels. Thus, for example, all of the encoders and the User can zoom in to enlarge the video display of a clip, and zoom out to view a wide-angle display.

Any or all of the GUIs of the present invention can be provided with an expandable toolbar. Therefore, new tools and features can be added to the GUIs. For example, search features that permit the User to search for video clips according to turf, weather, or day/night can be added to the appropriate User and encoder GUIs.

The present invention is readily implemented using well known hardware components. In addition, the software applications required to implement the invention can be readily devised by one of skill in the art using well-known programming techniques.

The preferred embodiment of the present invention is implemented using the MPEG-2 format for the video clips. However, any other appropriate video format may also be used. The MPEG-2 format can be supported by a hardware component such as a hardware-based MPEG-2 decoder card. However, the invention can also be readily implemented using software or firmware support for the MPEG-2 format video.

Those of ordinary skill in the art will recognize that variations which embody the spirit of the present invention are possible and are intended to be included within the scope of the amended claims.

Claims

- ✓. A computer-implemented method for indexing, sorting, and displaying a database, comprising the steps of:
- a. creating a searchable computer database structure for storing video and informational data;
 - b. determining the discrete component clips of at least one video record such that each clip represents a predetermined event;
 - c. assigning an identification number to each clip such that all clips showing the same event have same clip identification number;
 - d. determining the beginning and ending points of each clip;
 - e. storing to the database structure the determination of the discrete component clips, the identification number, and the beginning and ending points of steps b through d;
 - f. identifying at least one person appearing in at least one of the discrete component clips;
 - g. storing the identification information of step f to the database structure;
 - h. assigning a personal identification number to each person identified in step f;
 - i. storing the personal identification number to the database structure;
 - j. storing selected information about at least the identified person such that the

selected information is indexed to the identified person's personal identification number;

k. using the personal identification number and the clip identification numbers to index the informational database to the component video clips; wherein, in response to input user-defined search criteria, any video clip and associated indexed information satisfying the search criteria is retrieved from the database structure for display to a user.

2. The method of Claim 1, further comprising the steps of:

identifying a plurality of video clips having the same clip identification number; and synchronizing the beginning and ending points of the identified video clips; wherein a display of an identified video clip can be switched in real time to a display of any other identified video clip having the same identification number.

3. The method of Claim 1, wherein the informational database includes any information to be indexed to any discrete component clip in at least one video record.

4. The method of Claim 3, wherein the information in the informational database includes audio, graphical, and textual information.

5. The method of Claim 1, further comprising the steps of:

providing a predefined rating structure; and using the predefined rating structure to assign a rating to any of a video record, video clip, performance of at least one person appearing in a video clip, overall performance of at least one person appearing in a plurality of video clips.

6. The method of Claim 1, further including the step of displaying any video clip and associated indexed information retrieved from the database structure in response to the input user-defined search criteria on a dedicated console.

7. The method of Claim 1, further comprising the step of providing at least one computer graphical user interface for performing any or all of steps a through k.

8. The method of Claim 1, further comprising the step of controlling the display of the video clip at a selected frame interval to permit a slow motion display of the video clip.

9. A computer-implemented method for indexing, sorting, and displaying a sports video database comprising the steps of:

performing a first encoding step to determine, name, and batch encode the discrete component clips of at least one video record of a sporting event to a database structure;

performing a second encoding step to enter play information regarding the sporting event to the database structure;

performing a third encoding step to identify all persons appearing in one or more of the batch encoded video clips and to enter the identification information to the database

structure;

performing a fourth encoding step to evaluate and rate any of the batch encoded video clips and any of the persons appearing in one or more of the batch encoded video clips and to enter the rating to the database structure;

performing a fifth encoding step to update any information stored in the database structure; and

indexing the batch encoded video clips of the first encoding step to the information stored in the database structure in the second through fifth encoding steps; wherein, in response to the input of user-defined search criteria, any video clip and indexed information satisfying the search criteria is retrieved from the database structure for display to a user.

10. The method of Claim 9, wherein the first encoding step comprises the steps of:
 - assigning an identification number to each video clip such that all video clips showing the same event have same clip identification number;
 - determining the beginning and ending points of each clip; and
 - storing the identification number, and the beginning and ending points to the database structure.

11. The method of Claim 9, wherein the third encoding step comprises the steps of:
 - assigning a personal identification number to each person identified in a video clip; and
 - storing the personal identification number to the database structure;

12. The method of Claim 10, wherein the fourth encoding step comprises the steps of:
 - storing selected information about at least an identified person such that the selected information is indexed to the identified person's personal identification number; and
 - using the identified person's personal identification number and the clip identification numbers to index the informational database to the component video clips.

13. The method of Claim 9, further comprising the steps of:
 - identifying a plurality of video clips having the same clip identification number; and
 - synchronizing the beginning and ending points of the identified video clips; wherein a display of an identified video clip can be switched in real time to a display of any other identified video clip having the same identification number.

14. The method of Claim 9, wherein the database structure includes information selected from the group consisting of audio, graphical, and textual information.

15. The method of Claim 9, further including the step of displaying any video clip and associated indexed information retrieved from the database structure in response to the input user-defined search criteria on a dedicated console.

16. The method of Claim 9, further comprising the step of providing at least one graphical user interface for performing any or all of the encoding steps.

17. The method of Claim 9, further comprising the step of controlling the display of the video clip at a selected frame interval to permit a slow motion display of the video clip.

18. A computerized system for indexing, sorting, and displaying a sports video database comprising:

a database structure;

at least one computer for accessing the database structure and for running software applications to access and modify the database structure;

a first encoder software application for use with the at least one computer by a first encoder in determining, naming, and batch encoding the discrete component clips of at least one video record of a sporting event to the database structure;

a second software application for use with the at least one computer by a second encoder to enter play information regarding the sporting event to the database structure;

a third software application for use with the at least one computer by a third encoder to identify all persons appearing in one or more of the batch encoded video clips and to enter the identification information to the database structure;

a fourth software application for use with the at least one computer by a fourth encoder to evaluate and rate any of the batch encoded video clips and any of the persons appearing in one or more of the batch encoded video clips and to enter the rating to the database structure;

a fifth software application for use with the at least one computer by a fifth encoder to update any information stored in the database structure; and

an indexing software application to index the batch encoded video clips to the information stored in the database structure by the second through fifth encoders; wherein, in response to the input of user-defined search criteria to the at least one computer, any video clip and indexed information satisfying the search criteria is retrieved from the database structure for display to a user.

19. The system of Claim 18, wherein each of the first through fifth encoders and the user has a separate dedicated graphical user interface to access the computerized system.

20. The system of Claim 18, further comprising means for synchronizing a plurality of different video clips of the same event such that a display of an identified video clip can be switched in real time to a display of any other identified video clip.